REMARKS

The Examiner's Action mailed on December 14, 2004, has been received and its contents carefully considered. Additionally attached to this Amendment is a Petition for a One-month Extension of Time, extending the period for response to April 14, 2005.

In this Amendment, Applicant has amended independent claim 1, canceled claims 11 through 20 and added claims 21 through 26. Claim 1 is the independent claim, and claims 1 through 10 and 21 through 26 are pending in the application. For at least the following reasons, it is submitted that this application is in condition for allowance.

The Examiner's Action has rejected claims 1, 2, 6, 11, 12 and 16 as being anticipated by *Noerholm* (USP 4,331,947). Because claims 11, 12 and 16 have been canceled, Applicant will treat this rejection as pertaining only to claims 1, 2 and 6. It is submitted that these claims are *prima facie* patentably distinguishable over the cited reference for at least the following reasons.

It is well settled that a reference may anticipate a claim within the purview of 35 U.S.C. § 102 only if all the features and all the relationships recited in the claim are taught by the referenced structure either by clear disclosure or under the principle of inherency.

Applicant's independent claim 1 is directed to a semiconductor device which includes a semiconductor substrate and a fuse circuit disposed on the semiconductor substrate. The fuse circuit includes a first and a second conductive region, with the first conductive region having a multi-layered structure and the second conductive region having a less layered structure than the first conductive region. Such configuration allows an area for the fuse to be minimized on the semiconductor substrate, and allows the fuse to be disconnected at a desired location. This claimed configuration is not disclosed (or suggested) by the cited reference.

Noerholm discloses an electric safety fuse, such as shown in figure 8, which is of a type where the fuse element is surrounded by an arc suppression material, such as quartz sand (see column 1, lines 6 through 13). This reference discloses that the safety fuse includes a supporting member 18 which is made of an electric insulator, and which has disposed thereon various conductive layers 19 through 23, as shown in figure 8.

However, and in contrast to the present invention, this reference does not disclose a semiconductor device which includes a semiconductor substrate and a fuse circuit disposed thereon, as recited by Applicant's independent claim 1. In fact, not only does this reference not disclose or suggest a semiconductor

substrate having a fuse circuit disposed thereon, but this reference would appear to teach away from such a configuration, since this reference is specifically directed to a type of fuse in which the fuse elements are surrounded by an arc suppression material, such as quartz sand. Surrounding Applicant's claimed fuse circuit with quartz sand, as required by the disclosed reference, would likely damage the overall semiconductor device. As such, it is submitted that Applicant's independent claim 1, and the claims dependent therefrom, have not been anticipated by the cited reference. It is thus requested that these claims be allowed and that this rejection be withdrawn.

The Examiner's Action has also rejected claims 3 through 5, 7 through 10, 13 through 15, and 17 through 20 as being obvious over *Noerholm* in view of *Marr*, *Whitney et al.*, and *Okada*. Because claims 13 through 15 and 17 through 20 have been canceled, Applicant will treat this rejection as pertaining only to claims 3 through 5 and 7 through 10. It is submitted that these claims are *prima facie* patentably distinguishable over the cited references for at least the following reasons.

Applicant's claims 3 through 5 and 7 through 10 depend from Applicant's independent claim 1, which, as noted above, has not been anticipated by or otherwise rendered obvious in view of *Noerholm*. Moreover, neither *Marr*, *Whitney et al.*, nor *Okada* overcome the above noted deficiencies of *Noerholm*. That is,

and as noted above, *Noerholm* teaches away from a fuse circuit that is disposed on a semiconductor substrate of a semiconductor device, so there would have been no motivation for one skilled in the art to have combined the teachings of *Marr, Whitney et al.* and/or *Okada* with those of *Noerholm*, except in a hindsight attempt of reconstructing Applicant's claimed invention.

Moreover, although *Marr* does disclose a semiconductor fuse, this reference only discloses a conventional fuse circuit which includes a conductive center region 26 and electro-pad terminals 24 and 25 arranged at ends of the conductive region 26, as shown in figures 7 and 8. However, this conductive region is a single-layered structure, and is not a multi-layered structure, as recited by Applicant's independent claim 1. Moreover, this reference does not disclose or suggest a fuse circuit which includes a first conductive region having a multi-layered structure and a second conductive region having a less layered structure than the first conductive region, as recited by claim 1.

Further, *Okada* simply describes a further conventional fuse structure formed on a semiconductor substrate which includes a conductive region 52 and fuse terminals 46A and 46B arranged at ends of the conductive region 52, such as shown in figure 8. As further disclosed by this reference, the conductive region 52 is a single-layered structure, but is not a multi-layered structure as recited by Applicant's independent claim 1. Moreover, and similar to the deficiencies of

Marr, this reference does not disclose or suggest a first conductive region having a multi-layered structure and a second conductive region having a less layered structure than a first conductive region, as recited by claim 1.

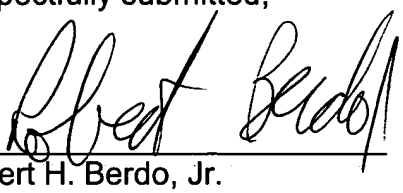
Further, *Whitney et al.* is directed to a ceramic chip fuse, but does not disclose or suggest a fuse circuit that is formed on a semiconductor substrate, as recited by Applicant's independent claim 1. As such, it is submitted that the cited secondary references do not overcome the above-noted deficiencies of *Noerholm*, so that the claims dependent from claim 1 are *prima facie* patentably distinguishable over the cited combination of references, either taken alone or in any reasonable combination, for at least the same reasons as independent claim 1. It is thus requested that these claims all be allowed and that these rejections be withdrawn.

Applicant has also added dependent claims 21 through 26 which recite other aspects of the invention, which are not disclosed or suggested by the cited references. It is requested that these claims be allowed.

It is submitted that this application is in condition for allowance. Such action and the passing of this case to issue are requested.

Should the Examiner feel that a conference would help to expedite the prosecution of this application, the Examiner is hereby invited to contact the undersigned counsel to arrange for such an interview.

Respectfully submitted,



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Date

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